

**Notice of Allowability**

Application No.

09/771,009

Applicant(s)

HOLZBERG ET AL.

Examiner

Georgia L. Helmer

Art Unit

1638

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment of 30 January 2004.
2. ☒ The allowed claim(s) is/are 5, 8-30 and 58.
3. ☒ The drawings filed on 25 January 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____.   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Angela Horne on 16 April 2004.

2. In the claims:

Cancel claims 1-4, 6-7, 31-57 and 59-67.

*Replace claim 5 with:*

Claim 5. A polynucleotide encoding a promoter operatively linked to a transcription unit, wherein the promoter comprises a promoter functional in a plant or plant cell; and wherein the transcription unit encodes a fusion protein comprising:

- (a) a viral protein obtained from a plant single-stranded RNA virus, wherein the plant single-stranded RNA virus is a barley stripe mosaic virus (BSMV),
- (b) a protein of interest, and
- (c) an autoproteolytic peptide comprising no more than 20 amino acids, wherein the autoproteolytic peptide comprises a 2A autoproteolytic peptide

from a foot and mouth disease virus (FMDV), wherein (c) is fused between (a) and (b).

*Replace claim 8 with:*

Claim 8. The polynucleotide according to claim 5, where in the autoproteolytic peptide comprises the amino acid sequence of SEQ ID NO: 1.

*Replace claim 10 with:*

Claim 10. The polynucleotide of according to Claim 5, wherein the viral protein is a BSMV gamma-b protein.

*Replace claim 13 with:*

Claim 13. The polynucleotide of according to Claim 5, wherein the viral protein is a BSMV beta-b protein.

*Replace claim 14 with:*

Claim 14. The polynucleotide according to Claim 13, wherein the autoproteolytic peptide is fused to the N-terminus of the viral protein, and where the protein of interest is fused to the N-terminus of the autoproteolytic peptide.

*Replace claim 58 with:*


Claim 58. A viral genome comprising at least one duplicated genomic nucleic acid component, wherein the duplicated genomic nucleic acid component encodes a promoter operatively linked to a fusion protein, wherein the fusion protein comprises

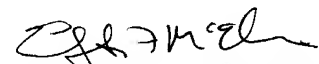
- (a) a viral protein obtained from a plant single-stranded RNA virus, wherein the plant single-stranded RNA virus is a barley stripe mosaic virus (BSMV),
- (b) a protein of interest, and
- (c) an autoproteolytic peptide comprising no more than 20 amino acids, wherein the autoproteolytic peptide comprises a 2A autoproteolytic peptide from a foot and mouth disease virus (FMDV), wherein (c) is fused between (a) and (b).

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Georgia L. Helmer whose telephone number is 571-272-0796. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 571-272-0804. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Georgia Helmer PhD  
Patent Examiner  
Art Unit 1638  
3 May 2004

  
ELIZABETH F. McELWAIN  
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